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| 10/731,606 | 12/08/2003 | Yuko Takeda | 60395 (49381) | 4761 |
| 21874 7590 03/30/2010 EDWARDS ANGELL PALMER & DODGE LLP P.O. BOX 55874 BOSTON, MA 02205 | | | EXAMINER LOUIE, OSCAR A | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/731,606 | Applicant(s) TAKEDA ET AL. | |
| | Examiner OSCAR A. LOUIE | Art Unit 2436 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This final action is in response to the amendment filed on 12/02/2009. Claims 1-20 & 23-26 are pending and have been considered as follows.

Claim Objections

1. Claims 21 & 22 are objected to because of the following informalities:
 - Claims 21 & 22 from here on should be written as “Claims 21 & 22 (Canceled).” in order to maintain clarity of record and consistency of claim status; the examiner has taken the assumption based on the Claims annotations that Claims 21 & 22 are indeed canceled; Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - a. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1-4, 12, 13, 23, & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US 6,659,353) in view of Hutchison (US 2003/0145218).

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Claim 1: Okamoto et al. disclose An image forming apparatus in combination with a sheet having one or a plurality of memories (*sheet such as bond, document or like, each of which sheets is provided with an electronic circuit chip from or in which information can be read out or written and has visible information*) (column 2, lines 49-53; column 3, lines 15-20;; column 5, lines 61-65; Fig. 1, item 13; Fig. 3, item 11), the apparatus including-comprising:

- i. an acquisition unit for acquiring an image signal (*a scanner unit scans the surface of the sheet and the internal structure thereof*) (column 7, lines 5-10; column 10, lines 52-60; Fig. 2, item 24);
- ii. an image-forming unit for forming an image based on the image signal acquired by said acquisition unit) (column 2, lines 49-53; column 3, lines 15-20;; column 5, lines 61-65; Fig. 1, item 13; Fig. 3, item 11);
- iii. an encryption key creating unit for creating an encryption key when said acquisition unit acquires the image signal; an encrypting unit for encrypting the image signal with the encryption key created by said encryption key creating unit (*it is taught that information uniquely associated with each sheet is encrypted or a digital signature is generated for affixation, whereon the encrypted information or the digital signature or both of them are stored in the above-mentioned electronic circuit chip*) (column 2, lines 17-23; Fig. 3, item 31); and

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- iv. a writing unit for writing the encryption key and the encrypted image signal into the one or a plurality of memories memory on said sheet (*encrypted information is stored in the electronic circuit chip*) (column 3, lines 15-25, lines 45-50; column 7, lines 27-33; column 7 line 60 to column 8, line 15; Fig. 2, item 21; Fig. 3, item 32) ;
- v. a reading unit for reading an encrypted image and encryption key from the sheet (*the information stored in the electronic circuit is read out*) (column 10, lines 53-60; Fig. 9, item 91); and
- vi. a decryption unit for decrypting the encrypted image using the encryption key read by the reading unit (*the information 12 becomes different from that resulting from the decryption of the encrypted information stored in the electronic circuit chip 13*) (column 6, line 60 to column 7, line 4; column 7, lines 30-60; Fig. 6, item 63).

Okomoto et al. do not explicitly disclose an encryption key creating unit for creating an encryption key when said acquisition unit acquires an image signal and a step of storing the encryption key in a memory. However, Hutchison discloses a digital copier, which further discloses an encryption key creating unit for creating an encryption key when said acquisition unit acquires an image signal. The session keys, which are unique to every "session," can be created at every new copying job, or with every scanned page image even within a job, or can relate to a time of day or other incidental data (paragraphs [0025], [0028]) and a step of storing the encryption key in a memory (paragraph [0030]).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time of the applicants' invention to modify the teachings of Okomoto et al. to include an encryption key creating unit and to stored an encrypted encryption key. One of ordinary skill would have been motivated to do so in order to protect from being hacked or granting unwanted accessed as taught by Hutchison (abstract).

Claim 2: Okomoto et al. and Hutchison disclose an image forming apparatus, as in claim 1 above, Okomoto et al. further disclose wherein the reading unit further comprises:

- i. an image reading unit for reading the image formed on said sheet having one or a plurality of *memories (a scanner unit 43 scans the surface of the sheet 11 and the internal structure thereof) (column 3, lines 56-65; column 7, lines 5-10; Fig. 6, item 64); and*
- ii. a memory reading unit for reading the encryption key from the memory when said image reading unit reads the image(*information originating from the electronic circuit) (Fig. 6, item 62);*

Claim 3: Okomoto et al. and Hutchison disclose an image forming apparatus, as in claim 1 above, Okomoto et al. further disclose that the image forming apparatus further comprises an information acquiring/creating unit for acquiring or creating information about the image encrypted with the encryption key(*column 7, lines 5-20*), wherein said writing unit writes the encryption key and the information acquired or created by said information acquiring/creating unit into the same memory, or different memories on said sheet having one or a plurality of memories(*information acquired by scanning the sheet and the information stored in the above-mentioned electronic circuit chip, which method*

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is characterized in that the above-mentioned information is stored in at least two electronic circuit chips incorporated in a single sheet) (column 3, lines 55-67)..

Claims 4 and 13: Okomoto et al. and Hutchison disclose an image forming apparatus, as in claim 2 above and 12 below, Okomoto et al. further disclose, wherein said memory reading unit reads the encryption key and information about the first image encrypted with the encryption key from the same memory, or different memories on said sheet having one or a plurality of memories(Fig. 10), when said image reading unit reads the first image, and said image forming apparatus further comprises a display unit for displaying the information read by said memory reading unit(*The control module 52 commands the output unit 44 to output the information which conforms with the result of the decision made by the discriminating module 54 through a display or the like means*)(column 13, lines 10-15).

Claims 12 and 24: Okomoto et al. and Hutchison disclose an image forming apparatus, as in claim 23 below, Okomoto et al. further disclose that the image forming apparatus in combination with a sheet having one or a plurality of memories storing an encryption key, the apparatus further including,

- i. an image reading unit for reading a first image formed on the sheet having one or a plurality of memories storing the encryption key(*a scanner unit 43 scans the surface of the sheet 11 and the internal structure thereof) (column 3, lines 56-65; column 7, lines 5-10; Fig. 6, item 64), and*

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ii. an image forming unit for forming a second image on another sheet, based on an image signal of the first image read by said image reading unit(column 3, lines 15-25), the apparatus further comprising:

(1) a memory reading unit for reading the encryption key from the memory on said sheet having one or a plurality of memories when said image reading unit reads the first image(*paragraphs [0010], [0027]*) of Hutchison); and

(2) a decrypting unit for decrypting the image signal of the image read by said image reading unit, with the encryption key read by said memory reading unit, wherein said image forming unit forms the second image based on the image signal decrypted by said decrypting unit on said another sheet (*the information 12 becomes different from that resulting from the decryption of the encrypted information stored in the electronic circuit chip 13*)(column 6, line60 to column 7, line4; column 7, lines 30-60: Fig. 6, item 63).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the applicants' invention to modify the teachings of Okomoto et al. to read encryption key from the memory. One of ordinary skill would have been motivated to do so in order to protect from being hacked or granting unwanted accessed as taught by Hutchison (abstract).

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Claim 23: Okomoto et al. and Hutchison disclose an image forming apparatus, as in claim 2 above, and Okomoto et al. further disclose, wherein said sheet comprises a first memory containing an encryption key and a second memory containing an encrypted image (*column 3, lines 60-65*).

4. Claims 5-11, 14-20, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US 6,659,353) in view of Imai (US 5,512,977) in view of Harada et al. (US 20030007640).

Claims 5, 14, and 25: Okomoto et al. and Hutchison disclose an image forming apparatus, as in claims 1 and 24 above, while neither of them explicitly disclose that the reading unit includes the number of times the image was formed. However, Harada et al. disclose a similar apparatus, which includes content storage unit with pre-stores usage condition in correspondence with the content (*page 11, paragraph 0215*). The usage condition is permitted a permitted number of playback times. The permitted number of playback times imposes limitation on the total number of times that the user is permitted to play back the stored content that correspond to the usage condition (*page 11 paragraph 0216*). The condition storage unit shows (writes) a permitted playback (image formed) number of time (*page 2, paragraphs 0024, 0214-0240 and figure 13*). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicants' invention to modify the combined method of Okomoto et al. and Hutchison to include the number of times a copy was made in the copying machine as taught by Harada et al. One of ordinary skill would have been motivated to include the number of times a copy was made in order to determine when the authorized limit is reached.

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Claims 6, 15, and 26: Okomoto et al., Hutchison, and Harada et al disclose an image forming apparatus, as in claims 5, 14 and 25 above, and Harada et al. further disclose that the condition storage unit shows (writes) a permitted playback (image formed) number of time (*page 2, paragraphs 0024, 0214-0240 and fig 13*). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicants' invention to modify the combined method of Okomoto et al. and Hutchison to include the number of times a copy was made in the copying machine as taught by Harada et al. One of ordinary skill would have been motivated to include the number of times a copy was made in order to determine when the authorized limit is reached.

Claims 7 and 16: Okomoto et al., Hutchison, and Harada et al. disclose an image forming apparatus, as in claims 6 and 15 above, and Imai further discloses that the control circuit accepts input data from the keyboard and display necessary data on the display (*column 10, lines 55-60*).

Claims 8 and 17: Okomoto et al., Hutchison, and Harada et al. disclose an image forming apparatus, as in claims 5 and 14 above, and Harada et al. further disclose that the condition storage unit shows (*writes*) a permitted playback (image formed) number of time and a condition judgment unit which judges to play back the content only when the number of times of actual playback (image formed) of the content by the playback unit (*image processing unit*) is equal to or less than the permitted number of times (*page 2, paragraphs 0024, 0214-0240, and figure 11*). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicants' invention to modify the combined method of Okomoto et al. and Hutchison to include the number of times a copy

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was made in the copying machine as taught by Harada et al. One of ordinary skill would have been motivated to include the number of times a copy was made in order to determine when the authorized limit is reached.

Claims 9 and 18: Okomoto et al. and Hutchison disclose an image forming apparatus, as in claims 4 and 13 above, while neither of them explicitly disclose that the reading unit includes a period. However, Harada et al. disclose a similar apparatus in which the condition storage unit shows a permitted playback (*image formed*) period and a condition judgment unit which judges to determine if the date and time at which the content is to be played back by the playback unit is within the permitted playback period and then (*page 2, paragraphs 24, 243-250 and figure 12*). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicants' invention to modify the combined method of Okomoto et al. and Hutchison to include a predetermined time frame in the copying machine as taught by Harada et al. One of ordinary skill would have been motivated to define a time period in order to prevent unauthorized copy when the limit was reached.

Claims 10 and 19: Okomoto et al. and Hutchison disclose an image forming apparatus, as in claims 4 and 13 above, while neither of them explicitly disclose that the identifier read by the memory-reading unit include the identifier stored in the storing unit. However Harada et al. disclose a similar apparatus in which the record/playback (*image processing*) device includes a condition storage unit operable to store usage condition information (*identifiers*) showing a permissive condition for use of the content; and a condition judgment unit operable to judge whether use of the content is permitted

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according to the usage condition information (*page 1, paragraph 0012*). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicants' invention to modify the combined method of Okomoto et al. and Hutchison to include an identifier in the copying machine as taught by Harada et al. One of ordinary skill would have been motivated to include the identifier in order to prevent illegal copying.

Claims 11 and 20: Okomoto et al. and Hutchison disclose an image forming apparatus, as in claims 4 and 13 above, while neither of them explicitly disclose that the code inputted by the input unit and the code read by the reading unit are identical. However, Harada et al. disclose a similar apparatus which further discloses the record/playback (*image processing*) device includes a condition storage unit operable to store usage condition information (identifiers) showing a permissive condition for use of the content; and a condition judgment unit operable to judge whether use of the content is permitted according to the usage condition information (*page 1, paragraph 0012*). In case of receiving the read instruction from the input unit as well the information indicating of successful authentication from the authentication unit, the control unit outputs a storage instruction to the title key-generating unit of the decryption unit (*page 15, paragraph 0309*). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicants' invention to modify the combined method of Okomoto et al. and Hutchison to include a code in the copying machine as taught by Harada et al. One of ordinary skill would have been motivated to include the code in order to prevent illegal copying.

Response to Arguments

5. Applicant's arguments filed 12/02/2009 have been fully considered but they are not persuasive.

- The applicants' remarks with respect to "...the image signal acquired by the scanner 43 of Okamoto is not encrypted with an encryption key created when the image is acquired..." and "...Okamoto at least fails to describe at least "writing the encryption key into a memory on the sheet"..." and "...Okamoto fails to describe how to obtain an encryption key to be used at the time of the encryption or decryption, much less storing the encryption key in the electronic circuit chip on the sheet..." and "...there is no disclosure or suggestion for storing the encryption key in a memory on a sheet containing the image encrypted with the encryption key..." and "...there is not even a hint of suggestion that the memory for storage of the encryption key be contained in a sheet bearing the encrypted image..." and "...Okamoto nor Hutchison even suggest that the encryption key be stored in a memory on the sheet..." "a memory reading unit for reading the encryption key from memory when said image reading unit reads the image"..." and "...said writing unit writes the encryption key and the information acquires or created by said information acquiring/creating unit into the same memory, or different memories on said sheet having one or a plurality of memories"..." and "...said memory reading unit reads the encryption key and information about the image encrypted with the encryption key from the same or different memories on said sheet having one or a plurality of memories when said image reading unit reads the image"..." and "...sheet comprises a first memory containing an encryption key and a second memory containing an encrypted

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image"..." and "...said memory reading unit reads the encryption key and information about the image encrypted with the encryption key from said first memory on said sheet when said image reading unit reads the image"..." have been carefully considered but are non-persuasive;

- The examiner notes that the combined prior art of record provides a reasonable combined interpretation that includes disclosure for covering the storage of at least one encryption/decryption key in the at least one memory/memories; that is, Okamoto, provides disclosure for the "one or a plurality of memories" with their "circuit chip" which stores information that can be read/write in and out of and Hutchison provides the encryption/decryption key which is functionally equivalent to the stored encryption/decryption key(s) limitations found in applicants' claims; it is a reasonable combination of the above at least two prior art of record in order to show the storage and retrieval of the encryption/decryption key(s) on the circuit chip.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Oscar Louie whose telephone number is 571-270-1684. The examiner can normally be reached Monday through Friday from 8:30 AM to 5:00 PM. The examiner can also be contacted via E-mail to schedule a telephone discussion at OSCAR.LOUIE@USPTO.GOV.

If attempts to reach the examiner by telephone or E-mail are unsuccessful, the examiner's supervisor, Nasser Moazzami, can be reached at 571-272-4195. The fax phone number for Formal or Official faxes to Technology Center 2400 is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is only available through Private PAIR. If you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100 (local). For more information on the PAIR system or the EBC please visit <http://www.uspto.gov/patents/ebc/index.jsp>. If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000 (local).

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03/27/2010

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